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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,084	03/19/2004	Walter J. Smith	1370.002A	7707

23405 7590 06/15/2005

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ALBANY, NY 12203

EXAMINER

YAO, SAMCHUAN CUA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/805,084

Applicant(s)

SMITH, WALTER J.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-78 is/are pending in the application.
- 4a) Of the above claim(s) 1-72, 74 and 75 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 73 and 76-78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-53, drawn to a method of making a turbine brush seal and a product thereof. Classified in class 156 and subclass 279.
 - II. Claims 54-72, drawn to a system for creating a turbine brush seal. Classified in class 156 and subclass 578.
 - III. Claims 73-78, a flexible filament for a turbine brush seal. Classified in class 428 and subclass 397.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process as claimed can be practiced by another materially different apparatus such as forming a turbine brush without using an filament embedding machine recited in the apparatus claims. Similarly, inventions I and II are also related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case, the product as

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claimed can be made by another and materially different apparatus such as a turbine brush is formed without using an filament embedding machine recited in the apparatus claims

3. Inventions III and (I & II) are related as product and process/apparatus of use.

The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process/apparatus for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process/apparatus of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed can be used in a materially different process/apparatus of using that product such as using the filaments to form a fiber-reinforced composite.

4. Inventions I and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination does not require an n-point star filaments. The subcombination has separate utility such as using the recited filaments for making a fiber-reinforced composite.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. This application contains claims directed to the following patentably distinct species of the claimed invention:

- A: pointed n-point star;
- B: blunted n-point star,
- C: radiused n-point star.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 23, 49, 68, or 73 generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over

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the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

7. During a telephone conversation with Mr. Wayne Reinke on 06-09-05 a provisional election was made **with** traverse to prosecute the invention of Group II Species C, claims 73, and 76-78. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-72 and 74-75 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 73 and 77-78 are rejected under 35 U.S.C. 102(b or e) as anticipated by JP 2002-34870 A using Tanahashi et al (US 2004/0234428 A1) for English translation (102 (b)) or Tanahashi et al (US 2004/0234428 A1) (102 (e)).

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Tanahashi et al discloses a star-shaped ceramic fiber, the fiber is used to fabricate a holding seal material for an automobile catalytic converter (numbered paragraphs 15, 42, 56, 100, 121, 125, 234-235, 501-502, 515-516; figure 9).

Although not explicitly disclosed, in view that, both the present invention and

Tanahashi et al use a ceramic material to form a star-shaped fiber, the star-shaped ceramic fiber of Tanahashi et al is reasonably taken to be inherently

"capable of sustaining temperatures of at least a minimum temperature for at least about 10,000 hours, and wherein the minimum temperature is about 400 °C" (claim 73), 500 °C (claim 77), and 600 °C (claim 78) and capable of being

used as a bristle of a turbine sealing brush. In fact, the ceramic fiber of

Tanahashi et al is subjected to a temperature which is significantly higher than

the recited temperatures. Moreover, as noted above, the ceramic fiber is used to

fabricate a holding seal material for an automobile catalytic converter (see for example, number paragraphs 15, 42, & 56). It would be reasonable to expect

that, the ceramic fibers in a holding seal material of Tanahashi is reasonable

expected to last for significantly greater than 10,000 hours. Otherwise, one would

have to replace repeatedly a holding seal material for just a little over period of 1 year.

Note: MPEP 2133.01 states that "When applicant files a continuation-in part whose claims are not supported by the parent application, the effective filing date is the child CIP. Any prior art disclosing the invention or an obvious variant thereof having a critical reference date more than 1 year prior to the filing date of the child will bar the issuance of a patent under 35 U.S.C. 102(b). Paperless Accounting v. Bay Area Rapid Transit System, 804 F2d 659, 665, 231 USPQ 649, 653 (Fed. Cir. 1986)." (Emphasis added).

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11. Claims 73 and 77-78 are rejected under 35 U.S.C. 102(b) as anticipated by Dobo et al (US 4,175,153).

Dobo et al discloses ceramic or metallic alloy star-shaped fibers (abstract; col. 6 lines 9-48). Although not explicitly disclosed, in view that, the present invention and Dobo et al both use a ceramic material to form a star-shaped fiber, the star-shaped ceramic fiber of Tanahashi et al is reasonably taken to be inherently *"capable of sustaining temperatures of at least a minimum temperature for at least about 10,000 hours, and wherein the minimum temperature is about 400 °C"* (claim 73), 500 °C (claim 77), and 600 °C (claim 78) and capable of being used as a bristle of a turbine sealing brush.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 76 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-348740 A using Tanahashi et al (US 2004/0234428 A1) for English translation (102 (b)) or Tanahashi et al (US 2004/0234428 A1) (102 (e)).

Absent any showing of unexpected result, it would have been obvious in the art to form a star-shaped ceramic fiber where the star-shaped fiber has arcuate pointed portions, because Tanahashi et al is open to *"any desired shape"* and the various fibers taught by Tanahashi et al have a cross-section with arcuate end-portions as

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illustrated in figure 9. Moreover, a star-shaped fiber having arcuate pointed portions is old in the art.

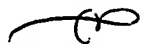
Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
06-09-05